

INDEX

Volume 40, 1989

AUTHOR INDEX

A

- Almy, J. See C. S. Ough. 40:219-20.
 Andersen, P. C., and B. V. Brodbeck. Chemical composition of xylem exudate from bleeding spurs of *Vitis rotundifolia* Noble and *Vitis* hybrid Suwannee in relation to pruning date. 40:155-160.
 Amano, Y. See J. C. Ogonna. 40:292-9.
 Anderson, M. A. See M. A. Matthews. 40:52-60.
 Ash, J. See R. Degré. 40:309-15.
 Asmundson, R. V. See W. J. Kelly. 40:277-82.

B

- Barillère, J. M. See V. Cheynier. 40:36-42.
 Bates, R. P. See C. A. Sims. 40:272-6.
 Baumes, R. See C. Tesnière. 40:183-8.
 Bayonove, C. See C. Tesnière. 40:183-8.
 Benz, M. See W. M. Kliever. 40:259-64.
 Bissell, P., A. Ewart, and W. Sangtippawan. Loading concentrations for tartaric and malic acid for single column HPLC organic acid analysis. 40:316-19.
 Bisson, L. F. See C. J. McClellan. 40:9-15.
 See F. F. Montiero. 40:1-8.
 Borrull, F. See R. Marcé. 40:194-8.
 Bowen, P. See W. M. Kliever. 40:259-64.
 Brodbeck, B. V. See P. C. Andersen. 40:155-60.
 Broadbent, F. E. See W. L. Peacock. 40:16-20.

C

- Calull, M. See R. Marcé. 40:194-8.
 Calvayrac, R. See D. Troton. 40:175-82.
 Charpentier, M. See D. Troton. 40:175-82.
 Cheynier, V., J. Rigaud, J. M. Souquet, J. M. Barillère, and M. Moutounet. Effect of pomace contact and hyperoxidation on the phenolic composition and quality of Grenache and Chardonnay wines. 40:36-42.
 ———, J. M. Souquet, and M. Moutounet. Glutathione content and glutathione to hydroxycinnamic acid ratio in *Vitis vinifera* grapes and musts. 40:320-4.
 Christensen, L. P., and R. J. Smith. Effects of persistent woody laterals on bud performance of Thompson Seedless fruiting canes. 40:27-30.
 See W. L. Peacock. 40:16-20.
 Clark, J. R. See R. G. Goldy. 40:253-8.
 Conradie, W. J., and D. Saayman. Effects of long-term nitrogen, phosphorus, and potassium fertilization on Chenin blanc vines. I. Nutrient demand and vine performance. 40:85-90.
 ———, and ———. Effects of long-term nitrogen, phosphorus, and potassium fertilization on Chenin blanc vines. II. Leaf analyses and grape composition. 40:91-8.

D

- Davenport, M. See C. S. Ough. 40:208-13.

- Degré, R., D. Y. Thomas, J. Ash, K. Mailhot, A. Morin, and C. Dubord. Wine yeast strain identification. 40:309-15.
 De La Torre, M. C. See M. Marti. 40:221-3.
 Does, A. L. See C. J. McClellan. 40:9-15.
 Dozen, N. M., and A. C. Noble. Sensory study of the effect of fluorescent light on a sparkling wine and its base wine. 40:265-71.
 Drysdale, G. S., and G. H. Fleet. The growth and survival of acetic acid bacteria in wines at different concentrations of oxygen. 40:99-105.

- Dubord, C. See R. Degré. 40:309-15.
 Duteurtre, B. See D. Troton. 40:175-82.

E

- Ewart, A. See P. Bissell. 40:316-19.

F

- Flanzy, C. See C. Tesnière. 40:183-8.
 Fleet, G. H. See G. S. Drysdale. 40:99-105.

G

- Gallander, J. F. See K. L. Wilker. 40:224-6.
 Garcia-Rodriguez, C. See E. Hebrero. 40:283-91.
 Goheen, A. C. Honorary Research Lecture. Virus diseases and grapevine selection. 40:67-72.
 Goldy, R. G., E. P. Maness, H. D. Stiles, J. R. Clark, and M. A. Wilson. Pigment quantity and quality characteristics of some native *Vitis rotundifolia* Michx. 40:253-8.
 Guasch, J. See R. Marcé. 40:194-8.

H

- Hara, S. See J. C. Ogonna. 40:292-9.
 Hebrero, E., C. Garcia-Rodriguez, C. Santos-Buelga, and J. C. Rivas-Gonzalo. Analysis of anthocyanins by high performance liquid chromatography-diode array spectroscopy in a hybrid variety (*Vitis vinifera* × *Vitis berlandieri* 41B). 40:283-91.
 Hellman, W. E., G. L. Yokum, and R. J. Robel. Preliminary evaluation of dimethyl anthranilate as a bird repellent on grapes. 40:140-2.
 Herrick, I. W. See C. W. Nagel. 40:81-5.
 Hopcroft, D. H. See W. J. Kelly. 40:277-82.
 Howell, G. H. See D. P. Miller. 40:170-4.
 Huang, Z., and C. S. Ough. Effect of vineyard locations, varieties, and rootstocks on the juice amino acid composition of several cultivars. 40:135-9.

I

- Inglede, W. M. See E. Munoz. 40:61-4.

J

- Jaworski, A. See C. Y. Lee. 40:43-6.
 Johnson, M. G. See K. J. Moore. 40:214-18.
 Johnson, R. P. See C. A. Sims. 40:272-6.
 Joseph, K. See C. S. Ough. 40:208-13.

K

- Kelly, W. J., R. V. Asmundson, and D. H. Hopcroft. Growth of *Leuconostoc oenos* under anaerobic conditions. 40:277-82.
- Kingston, C. M., and C. W. Van Epenhuijsen. Influence of leaf area on fruit development and quality of Italia glasshouse table grapes. 40:130-4.
- Kliwer, W. M., P. Bowen, and M. Benz. Influence of shoot orientation on growth and yield development in Cabernet Sauvignon. 40:259-64.
See A. Zelleke. 40:47-51.

L

- Lee, C. Y., and A. Jaworski. Major phenolic compounds in ripening white grapes. 40:43-6.
- Litchev, V. Influence of oxidation processes on the development of the taste and flavor of wine distillates. 40: 31-5.

M

- Mackenzie, D. H. See M. W. Moncur. 40:21-6.
- Magyar, I., and I. Panyik. Biological deacidification of wine with *Schizosaccharomyces pombe* entrapped in Ca-alginate gel. 40:233-40.
- Mailhot, K. See R. Degré. 40:309-15.
- Maness, E. P. See R. G. Goldy. 40:253-8.
- Marcé, R. M., M. Calull, J. Guasch, and F. Borrull. Determination of free amino acids in wine by HPLC using precolumn derivatization with phenylisothiocyanate. 40:194-8.
- Marti, M., and M. C. De La Torre. Determination of molecular weight of polysaccharides in musts and wines by HPLC. 40:221-3.
- Matthews, M. A., and M. M. Anderson. Reproductive development in grape (*Vitis vinifera* L.): Responses to seasonal water deficits. 40:52-60.
- McClellan, C. J., A. L. Does, and L. F. Bisson. Characterization of hexose uptake in wine strains by *Saccharomyces cerevisiae* and *Saccharomyces bayanus*. 40:9-15.
- McIntyre, G. N. See M. W. Moncur. 40:21-6.
- Miller, D. P., and G. S. Howell. The effect of various carbonic maceration treatments on must and wine composition of Marechal Foch. 40:170-4.
- Moncur, M. W., K. Rattigan, D. H. Mackenzie, and G. N. McIntyre. Base temperature for budbreak and leaf appearance of grapevines. 40:21-6.
- Monteiro, F. F., E. K. Trousdale, and L. F. Bisson. Ethyl carbamate formation in wine: Use of radioactively labeled precursors to demonstrate the involvement of urea. 40:1-8.
- Moore, K. J., and M. G. Johnson. Preservation of wine must yeasts by drying on calcium alginate swabs. 40:214-18.
- Morin, A. See R. Degré. 40:309-15.
- Morrison, J. C. See J. K. Rosenquist. 40:241-4.
- Moutounet, M. See V. Cheynier. 40:36-42.
- Munoz, E., and W. M. Ingledew. An additional explanation for the promotion of more rapid, complete fermentation by yeast hulls. 40:61-4.
- Murphey, J. M., S. E. Spayd, and J. R. Powers. Effect of grape maturation on soluble protein characteristics of Gewürztraminer and White Riesling juice and wine. 40:199-207.
- _____, _____, and _____. Estimation of soluble protein concentration of white wines using Coomassie brilliant blue G-250. 40:189-93.

N

- Nagel, C. W., and I. W. Herrick. The effect of malate or lactate

content on the pH-TA relationship of potassium bitartrate saturated alcohol-water solutions. 40:81-5.

_____, and K. M. Weller. Colorimetric determination of urea in wine. 40:143-4.

Nakamura, K. See J. C. Ogonna. 40:292-9.

Noble, A. C. See N. M. Dozen. 40:265-71.

O

Ogonna, J. C., Y. Amano, K. Nakamura, K. Yokotsuka, Y. Simazu, M. Watanabe, and S. Hara. A multistage bioreactor with replaceable bioplates for continuous wine fermentation. 40:292-8.

Ough, C. S., M. Davenport, and K. Joseph. Effects of certain vitamins on growth and fermentation rate of several commercial active dry wine yeasts. 40:208-13.

_____, D. Stevens, and J. Almy. Preliminary comments on effects of grape vineyard nitrogen fertilization on the subsequent ethyl carbamate formation in wines. 40:219-20.

See Z. Huang. 40:135-9.

See G. Trioli. 40:245-52.

P

Panyik, I. See I. Magyar. 40:233-40.

Peacock, W. L., L. P. Christensen, and F. E. Broadbent. Uptake, storage, and utilization of soil-applied nitrogen by Thompson Seedless as affected by time of application. 40:16-20.

Powers, J. R. See J. M. Murphey. 40:189-93, 199-207.

R

Rattigan, K. See M. W. Moncur. 40:21-6.

Reynolds, A. G., and D. A. Wardle. Effects of timing and severity of summer hedging on growth, yield, fruit composition, and canopy characteristics of de Chaunac. I. Canopy characteristics and growth parameters. 40:109-20.

_____, and _____. Impact of various canopy manipulation techniques on growth, yield, fruit composition, and wine quality of Gewürztraminer. 40:121-9.

_____, and _____. Influence of fruit microclimate on monoterpenic levels of Gewürztraminer. 40:149-54.

_____, and _____. Effects of timing and severity of summer hedging on growth, yield, fruit composition, and canopy characteristics of de Chaunac. II. Yield and fruit composition. 40:299-308.

Rigaud, J. See V. Cheynier. 40:36-42.

Rivas-Gonzalo, J. C. See E. Hebrero. 40:283-91.

Robel, R. J. See W. E. Hellman. 40:140-2.

Robillard, B. See D. Troton. 40:175-82.

Robin, J. P., C. G. Romieu, and F. X. Sauvage. Anaerobic metabolism of organic and amino acids in grape. I. A device for measuring the decarboxylating and ethanol-releasing kinetics from a single ¹⁴C-labeled berry. 40:161-9.

Rodriguez, S. B. See I.-M. Tegmo-Larsson. 40:106-8.

Romieu, C. G. See J. P. Robin. 40:161-9.

Rosenquist, J. K., and J. C. Morrison. Some factors affecting cuticle and wax accumulation on grape berries. 40:241-4.

S

Saayman, D. See W. J. Conradie. 40:85-90, 91-8.

Sangtippawan, W. See P. Bissell. 40:316-19.

Santos-Buelga, C. See E. Hebrero. 40:283-91.

Sauvage, F. X. See J. P. Robin. 40:161-9.

Sciancalepore, V. Extraction of protein from wine lees. 40:65-6.

Simazu, Y. See J. C. Ogonna. 40:292-9.

Sims, C. A., R. P. Johnson, and R. P. Bates. Quality of a non-

sulfited *Vitis rotundifolia* and a *Euvitis* hybrid white wine produced from ultrafiltered juice. 40:272-6.

Souquet, J. M. See V. Cheynier. 40:36-42.

Spayd, S. E. See J. M. Murphey. 40:189-93, 199-207.

Spittler, T. D. See I.-M. Tegmo-Larsson. 40:106-8.

Stevens, D. See C. S. Ough. 40:219-20.

Stiles, H. D. See R. G. Goldy. 40:253-8.

T

Tegmo-Larsson, I.-M., T. D. Spittler, and S. B. Rodriguez. Effect of malolactic fermentation on ethyl carbamate formation in Chardonnay wine. 40:106-8.

Tesnière, C., R. Baumes, C. Bayonove, and C. Flanzky. Effect of simulated alcoholic fermentation on aroma components of grape berries during anaerobic metabolism. 40:183-8.

Thomas, D. Y. See R. Degré. 40:309-15.

Trioli, G., and C. S. Ough. Causes for inhibition of an acid urease from *Lactobacillus fermentum*. 40:245-52.

Troton, D., M. Charpentier, B. Robillard, R. Calvayrac, and B. Duteurtre. Evolution of the lipid contents of Champagne wine during the second fermentation of *Saccharomyces cerevisiae*. 40:175-82.

Trousdale, E. K. See F. F. Montiero. 40:1-8.

V

Van Epenhuijsen, C. W. See C. M. Kingston. 40:130-4.

W

Wardle, D. A. See A. G. Reynolds. 40:109-20, 131-9, 149-54, 299-308.

Watanabe, M. See J. C. Ogbonna. 40:292-9.

Weller, K. M. See C. W. Nagel. 40:143-4.

Wilker, K. L., and J. F. Gallander. Comparison of Seyval blanc wines aged with air- and kiln-dried American white oak. 40:224-6.

Wilson, M. A. See R. G. Goldy. 40:253-8.

Y

Yokotsuka, K. See J. C. Ogbonna. 40:292-9.

Yokum, G. L. See W. E. Hellman. 40:140-2.

Z

Zelleke, A., and W. M. Kliever. The effects of hydrogen cyanamide on enhancing the time and amount of budbreak in young grape vineyards. 40:47-51.

SUBJECT INDEX

A

Acetic acid. concentration in wine. 40:99-105.

Acetic acid bacteria. growth and survival in wine. 40:99-105.

Acetobacter. 40:99-105

Acid(s). See also specific acid.

acetic. concentration in wine. 40:99-105.

amino. determination in wines. 40:194-8.
juice. 40:135-9.

fatty. characterization for yeast identification. 40:309-15.
metabolism in grapes. 40:161-9.
xylem exudate. 40:155-60.

malic. analysis. 40:316-19.

decomposition. 40:233-40, 292-8.

organic. anaerobic metabolism in grapes. 40:161-9.
HPLC analysis. 40:316-19.
pH and TA effects on. 40:81-5.

Acidity. reduction. 40:233-40, 292-8.

titratable. lactate content effect on. 40:81-5.

malate content effect on. 40:81-5.

total. carbonic maceration effects on Marechal Foch. 40:171-4.

Aging, wine. in oak. 40:224-6.

Alcoholic fermentation, simulated. effect on aroma components of grape berries during anaerobic metabolism. 40:183-8.

Algorithm to show effect of organic acid composition on pH and titratable acidity. 40:81-5.

Amino acids. determination in wine. 40:194-8.

juice. 40:135-9.

metabolism in grapes. 40:161-9.

xylem exudate. 40:155-60.

Anaerobic metabolism. *Leuconostoc oenos*. 40:277-82.

organic and amino acids in grapes. 40:161-9.

simulated alcoholic fermentation effect on aroma components of grape berries during. 40:183-8.

Anaerobiosis. 40:161-9, 183-8.

Anthocyanins. analysis by HPLC-diode array spectroscopy. 40:283-91.

Vitis rotundifolia pigmentation. 40:253-8.

Aroma. See also Sensory.

components of grape berries. 40:183-8.

lightstruck. 40:265-71.

simulated alcoholic fermentation effects on. 40:183-8.
sunstruck. 40:265-71.

Aromatic aldehydes. in aging wine distillates. 40:31-5.

Author guide. 40:

B

Barrel aging. air- and kiln-dried oak. 40:224-6.

oxidation effects on wine distillates during. 40:31-5.

Base temperature for grapevine budbreak and leaf appearance. 40:21-6.

Biocatalyst influence on wine quality. 40:233-40, 292-8.

Bioplate, replaceable. in multistage bioreactor for continuous fermentation. 40:292-8.

Bioreactor, multistage. 40:292-8.

Bird damage and control. 40:140-2.

Botrytis cinerea. susceptibility relationship to wax development on grape berries. 40:241-4.

Brandy. oxidation effects on flavor. 40:31-5.

Browning, wine. pigment quality of *Vitis rotundifolia*. 40:253-8.
pomace contact and hyperoxidation effects on Grenache and Chardonnay. 40:36-42.

Bud fruitfulness. woody laterals effects on. 40:27-30.

Budbreak. base temperatures for. 40:21-6.

hydrogen cyanamide effects on. 40:47-51.

C

Cabernet franc grapevines. reproductive development. 40:52-60.

response to seasonal water deficit. 40:52-60.

Cabernet Sauvignon grapevines. shoot orientation influence on growth and yield. 40:259-64.

Calcium alginate. gel entrapped *Schizosaccharomyces pombe* for deacidification of wine. 40:233-40.

- swabs for preservation of wine must yeasts. 40:214-18.
- Canopy management. Cabernet Sauvignon. 40:259-64.
 effects on monoterpene levels of Gewürztraminer. 40:149-54.
 effects of manipulation techniques on Gewürztraminer grapes and wine quality. 40:121-9.
 Gewürztraminer. 40:149-54.
 summer hedging effects on de Chaunac vines. 40:109-20, 299-309.
- Canopy microclimate. *See Canopy and Microclimate.*
- Carbonic maceration. effect on Marachel Foch must and wine. 40:170-4.
 in grape berries. 40:161-9, 181-8.
- Champagne wine. lipid content during second fermentation of *Saccharomyces cerevisiae*. 40:175-82.
- Chenin blanc grapevines. fertilization of. 40:85-90.
- Chromatography, gas. volatile compounds analysis. 40:183-8.
- Chromatography, high performance liquid. amino acid analysis in juice. 40:135-9.
 anthocyanins analysis. 40:283-91.
 free amino acids determination in wine. 40:194-8.
 organic acid analysis. 40:316-19.
 polysaccharide molecular weight determination in must and wine. 40:221-3.
- Continuous fermentation of wine. 40:292-8.
- Cuticle accumulation on grape berries. 40:241-4.
- Cyanamide. budbreak enhancement. 40:47-51.
- D**
- Deacidification of wine. 40:233-40, 292-8.
- Decarboxylation. measurement of decarboxylating and ethanol-releasing kinetics from a ¹⁴C-labeled berry. 40:161-9.
- de Chaunac grapevines. summer hedging effects on. 40:109-20, 299-309.
- Disease, grapevine. *Botrytis cinerea*. susceptibility relationship to wax development on grape berries. 40:241-4.
 virus. 40:67-72.
- Dimethyl anthranilate as bird repellent. 40:140-2.
- Distillate, wine. effects of oxidation process on flavor. 40:31-5.
- DNA fingerprinting for wine yeast identification. 40:309-15.
- Dormancy, grapevine. hydrogen cyanamide effect on release from. 40:47-51.
- Dye-binding assay of soluble protein concentration in white wines. 40:189-93.
- E**
- Epicuticular wax on grape berries. 40:241-4.
- Ethanol. acetic acid bacteria effect on concentration in wine. 40:99-105.
 -releasing kinetics in grape. 40:161-9.
- Ethyl carbamate. formation in wine. 40:1-8, 106-8, 219-20.
 nitrogen fertilization effects on formation in wine. 40:219-20.
- Eu vitis*. hybrid white wine quality from ultrafiltered juice. 40:272-6.
- Extraction of protein from wine lees. 40:65-6.
- F**
- Fatty acids. degradation during second fermentation of Champagne wine. 40:175-82.
 profile for yeast identification. 40:309-15.
- Fermentation, alcoholic. effect on aroma components of grape berries. 40:183-8.
 continuous. 40:292-8.
- lipid content evolution during second fermentation of *Saccharomyces cerevisiae*. 40:175-82.
- malolactic. fermentation effect on ethyl carbamate formation in wine. 40:106-8.
Leuconostoc oenos growth. 40:277-82.
- Saccharomyces cerevisiae*. 40:175-82, 309-15.
 yeast hulls. 40:61-4.
 yeast identification. 40:309-5.
- Fertilization, nitrogen. effects on ethyl carbamate formation in wines. 40:219-20.
 long term effects on Chenin blanc vines. 40:85-90.
 soil-applied. 40:16-20.
 phosphorus. long term effects on Chenin blanc vines. 40:85-90.
 potassium. long term effects on Chenin blanc vines. 40:85-90.
 Thompson Seedless vines. 40:16-20.
- Flavanols. 40:36-42, 43-6.
- Flavor. *See also Sensory.*
 Gewürztraminer berries. 40:149-54.
 wine distillates. 40:31-5.
- Flowering. *Vitis vinifera* response to seasonal water deficits. 40:52-60.
- Free radicals. lignin conversion to aromatic aldehydes. 40:31-5.
- French-American hybrids. hedging effects on. 40:109-20, 299-309.
- Fruit composition. light exposure effects on Gewürztraminer. 40:149-54.
 summer hedging effects on de Chaunac. 40:109-20, 299-309.
- Fruit development. leaf area influence on Italia grapes. 40:130-4.
- Fruitset. responses to seasonal water deficits. 40:52-60.
- G**
- Gas chromatography. *See Chromatography.*
- Gewürztraminer grapevines. canopy microclimate. 40:149-54.
 monoterpene levels of berries. 40:149-54.
- Gewürztraminer wine. soluble protein. 40:199-207.
- Glasshouse Italia grapes. 40:130-4.
- Gluconobacter. 40:99-105.
- Glucose uptake in wine yeasts. 40:9-15.
- Glutathione:hydroxycinnamic acid ratio in *Vitis vinifera*. 40:320-4.
- Grape(s). anthocyanins. 40:253-8.
 composition. long-term fertilization effects on. 40:91-8.
 glutathione:hydroxycinnamic acid ratio in *Vitis vinifera*. 40:320-4.
 Koshu. 40:292-8.
 pigmentation. 40:253-8.
 ripening. phenolic compounds during. 40:43-6.
 table. Italia. 40:130-4.
- Grape berry. alcoholic fermentation effects on aroma components. 40:183-8.
 anthocyanins. 40:253-8.
 aroma components during anaerobic metabolism. 40:183-8.
 cuticle and wax accumulation. 40:241-4.
 phenolic compounds concentrations during ripening. 40:43-6.
 pigmentation. 40:253-8.
- Grape skins. phenolic compounds concentration during ripening. 40:43-6.

Grapevine(s). bud fruitfulness. 40:27-30.
budbreak. 40:21-6.
Cabernet franc. 40:52-60.
Cabernet Sauvignon canopy management. 40:259-64.
canes. 40:27-30.
Chenin blanc. fertilization. 40:85-90, 91-8.
de Chaunac. summer hedging. 40:109-20, 299-309.
fertilization. *See Fertilization*.
French-American hybrids. 40:109-20, 299-309.
fruiting canes. 40:27-30.
Gewürztraminer. 40:149-54.
lateral shoots effects on budding performance. 40:27-30.
leaf appearance. 40:21-6.
Noble xylem exudate composition. 40:155-60.
nutrient demand. 40:85-90, 91-8.
pruning. *See also Canopy management*.
xylem fluid composition. 40:155-60.
selection. 40:67-72, 253-8.
shoot growth. 40:85-90, 91-98.
shoot positioning. 40:259-64.
summer hedging. 40:109-20, 299-309.
Suwannee xylem exudate composition. 40:155-60.
Thompson Seedless. bud fruitfulness. 40:27-30.
nitrogen fertilization. 40:21-6.
winter injury. 40:109-20, 299-309.
virus diseases. 40:67-72.
xylem. 40:155-60.

H

Heat sums. 40:21-6.
Hedging, summer. 40:109-20, 299-309.
Hexose uptake in *Saccharomyces cerevisiae* and *Saccharomyces bayanus*. 40:9-15.
HPLC. *See Chromatography*.
Hulls, yeast. *See Yeast hulls*.
Hybrid. anthocyanin analysis. 40:283-91.
French-American. canopy microclimate. 40:109-20, 299-309.
Vitis. Suwannee. 40:155-60.
Hydrogen cyanamide effects on budbreak. 40:47-51.
Hydroxycinnamic acids. 40:36-42, 320-4.
glutathione:hydroxycinnamic acid ratio in *Vitis vinifera*. 40:320-4.
tartrates. 40:43-6.

IJK

Identification. yeast strain. 40:309-15.
Immobilized yeast. 40:233-40, 292-8.
Italia grapes. leaf area effect on fruit development and quality. 40:130-4.
Juice, grape. colorimetric determination of urea in. 40:143-4.
Killer yeast. 40:292-8, 309-15.
Koshu must. continuous fermentation. 40:292-8.

L

Labeling, radioactive. demonstrate urea involvement in ethyl carbamate formation in wine. 40:1-8.
measure decarboxylating and ethanol-releasing kinetics from grapes. 40:161-9.
Lactate. effect on pH and titratable acidity. 40:81-5.
Lactic acid bacteria. effect on ethyl carbamate formation in wine. 40:106-8.
Leuconostoc oenos anaerobic metabolism. 40:277-82.
Lactobacillus fermentum. acid urease inhibition. 40:245-52.

Lateral shoots. effects on bud performance of fruiting canes. 40:27-30.
Leaf. analysis of fertilization effects. 40:91-8.
appearance. base temperatures for. 40:21-6.
area. influence on fruit development and quality of Italia grapes. 40:130-4.
initiation rate. 40:259-64.
Lees, wine. protein extraction of. 40:65-6.
Light exposure. effect on monoterpene levels of Gewürztraminer. 40:149-54.
Lightstruck aroma. 40:265-71.
Lignin. oxidation of in aging wine distillates. 40:31-5.
Lipid content of Champagne wine during second fermentation of *Saccharomyces cerevisiae*. 40:175-82.
Leuconostoc oenos. growth under anaerobic conditions. 40:277-82.

M

Macroelements in xylem exudate from bleeding spurs. 40:155-60.
Malate effect on pH and titratable acidity. 40:81-5.
Malic acid. analysis. 40:316-19.
decomposition. 40:233-40, 292-8.
Malolactic fermentation effect on ethyl carbamate formation in wine. 40:106-8.
Leuconostoc oenos growth under anaerobic conditions. 40:277-82.
Marachel Foch wine. carbonic maceration. 40:171-4.
Maturation, grape. effect on soluble protein characteristics of juice and wine. 40:199-202.
phenolic compounds in ripening white grapes. 40:43-6.
Metabolism, anaerobic in grape. 40:161-9.
Microclimate, grapevine. effect on monoterpene levels of Gewürztraminer. 40:149-54.
summer hedging effects on. 40:109-20, 299-309.
Microelements in xylem exudate from bleeding spurs. 40:155-60.
Mineral nutrition (grapevine). nitrogen. 40:16-20, 85-90.
phosphorus. 40:85-90.
potassium. 40:85-90.
Monoterpenes concentration in Gewürztraminer. 40:121-9.
Multistage bioreactor for continuous wine fermentation. 40:292-8.
Muscadine grapes. pigment characteristics. 40:253-8.
Must. carbonic maceration effect on Marechal Foch. 40:171-4.
glutathione:hydroxycinnamic acid ratio in *Vitis vinifera*. 40:320-4.
oxidation. 40:36-42.
polysaccharide molecular weight determination. 40:221-3.

N

Nitrogen fertilization. 40:16-20, 85-90, 90-8, 219-20.
effects on ethyl carbamate formation in wine. 40:219-20.
long-term effects on Chenin blanc vines. 40:85-90, 91-8.
soil-applied. on Thompson Seedless vines. 40:16-20.
Nutrient demand. N, P, and K fertilization. 40:85-90, 91-8.
O
Oak barrel. *See Barrel*.
Organic acids. analysis. 40:316-19.
metabolism in grapes. 40:161-9.
xylem exudate. 40:155-60.
Oxidation. effects on wine flavor. 40:31-5.

- effects on phenolic composition of Grenache and Chardonnay wines. 40:36-42.
must. 40:36-42.
non-enzymic. 40:31-5.
- Oxygen effect on acetic acid bacteria growth. 40:99-105.
- P**
- Paclobutrazol use on Gewürztraminer vines. 40:121-9.
- Pesticides. dimethyl anthranilate as bird repellent. 40:140-2.
- pH-TA relationship. lactate effect on. 40:81-5.
malate effect on. 40:81-5.
- Phenolic composition. carbonic maceration effects on. 40:171-4.
hyperoxidation effect on. 40:36-42.
Chardonnay wines. 40:36-42.
Grenache wines. 40:36-42.
ripening white grapes. 40:43-6.
pomace contact effect on. 40:36-42.
seasonal variations in ripening white grapes. 40:43-6.
- Phenols. interference in soluble protein estimation in white wines. 40:189-93.
- Phenology, grapevine. 40:21-6.
- Phosphorus fertilization effects on Chenin blanc vines. 40:85-90, 91-8.
- Pigment. *Vitis rotundifolia* characteristics. 40:253-8.
- Polyphenols in wine distillates. 40:31-5.
- Polysaccharides. molecular weight determination in musts and wines by HPLC. 40:221-3.
- Pomace contact effect on phenolic composition. 40:36-42.
- Potassium fertilization effects on Chenin blanc vines. 40:85-90, 91-8.
- Prefermentation treatment. hyperoxidation effects on phenolic content and quality. 40:36-42.
- Procyanidins in ripening white grapes. 40:43-6.
- Protein. assay for white grapes. 40:189-93
extraction from wine lees. 40:65-6.
grape maturation effect on stability in juice and wine. 40:199-207.
- Pruning. Cabernet Sauvignon. 40:259-64.
de Chaunac vines. 40:109-20, 299-309.
Gewürztraminer vines. 40:149-54.
lateral shoots. 40:24-30.
xylem fluid composition from pruning wounds. 40:155-60.
- R**
- Radioactive labeling of urea to monitor ethyl carbamate formation. 40:1-8.
- Residence time distribution of fluids in bioreactor. 40:292-8.
- Ripening, grape. leaf area influence on in Italia grapes. 40:130-4.
phenolic compound in white grapes. 40:43-6.
- Rootstock effects on amino acid content of juice. 40:135-9.
- S**
- Saccharomyces bayanus*. hexose uptake. 40:9-15.
- Saccharomyces cerevisiae*. continuous fermentation. 40:292-8.
deacidification of wine. 233-40, 292-8.
hexose uptake. 40:9-15.
identification of strains. 40:309-15.
lipid content evolution during second fermentation in Champagne wine. 40:175-82.
vitamin effects on growth and fermentation rate. 40:208-13.
- Schizosaccharomyces pombe*. 40:233-40, 292-8.
- Sensory qualities of wine. development during aging of wine distillates. 40:31-5.
fluorescent light effects on. 40:265-71.
lightstruck aroma. 40:265-71.
sparkling wine. 40:265-71.
sunstruck aroma. 40:265-71.
- Seyval blanc wine. oak aging. 40:224-6.
- Shoot growth. fertilization effects on. 40:85-90.
- Shoot orientation. Cabernet Sauvignon vines. 40:259-64.
- Sluggish fermentation. *See Fermentation*.
- Soil fertilization. 40:16-20, 85-90.
- Soluble protein. estimation in white wines. 40:189-93.
grape maturation effect on. 40:199-207.
- Sterols in yeast hulls. 40:61-4.
- Stuck fermentation. *See Fermentation*.
- Sugar(s). hexose uptake in wine yeasts. 40:9-15.
in xylem exudate. 40:155-60.
- Sulfites. effect on wine from ultrafiltered juice. 40:272-6.
- Sunstruck aroma. 40:265-71.
- T**
- Tartaric acid analysis. 40:316-19.
- Temperature. budbreak and leaf appearance requirements. 40:21-6.
- Terpenes in Gewürztraminer berries. 40:149-54.
- Thompson Seedless grapevines. bud fruitfulness. 40:27-30.
fruiting canes. 40:27-30.
nitrogen fertilization. 40:16-20.
- Titrate acidity. lactate effect on. 40:81-5.
malate effect on. 40:81-5.
- Training, grapevine. *See Canopy management*.
- UV**
- Ultrafiltration. 40:272-6.
- Unsaturated fatty acids in yeast hulls. 40:61-4.
- Urea. acid urease inhibition. 40:245-52.
colorimetric determination of. 40:143-4.
ethyl carbamate formation, involvement in. 40:1-8.
nitrogen fertilization effects on formation in wines. 40:219-20.
- Urease. from *Lactobacillus* fermentation. 40:245-52.
- Virus, grapevine. 40:67-72.
- Vitamin effects on growth and fermentation rate of wine yeasts. 40:208-13.
- Vitis rotundifolia*. *See also specific cultivars*.
pigment characteristics. 40:253-8.
wine quality from ultrafiltered juice. 40:272-6.
xylem exudate composition. 40:155-60.
- Vitis vinifera*. *See also specific cultivars*.
monoterpene levels of Gewürztraminer. 40:149-54.
reproductive development. 40:52-60.
seasonal water deficits, responses to. 40:52-60.
- Volatile fatty acids. profile for wine yeast strain identification. 40:309-15.
- W**
- Water potential. *Vitis vinifera* responses to seasonal deficit. 40:52-60.
- Wax accumulation on grape berries. 40:241-4.
- White Riesling wine. grape maturity effect on soluble protein. 40:199-207.
- Wine. analysis for urea. 40:143-4.

browning, prefermentation treatment effects on. 40:36-42.
 carbonic maceration. 40:171-4.
 Champagne, lipid content. 40:175-82.
 Chardonnay, prefermentation treatment. 40:36-42.
 color. 40:272-6.
 continuous fermentation. 40:292-8.
 deacidification. 40:233-40, 292-8.
 distillates. 40:31-5.
 ethyl carbamate formation in. 40:1-8, 106-8, 219-20.
 Gewürztraminer, canopy manipulation effects on wine quality. 40:121-9.
 soluble protein in. 40:199-209.
 Grenache, prefermentation treatments. 40:36-42.
 haze. 40:189-93.
 hyperoxidation. 40:36-42.
 lees, protein extraction from. 40:65-6.
 Marechal Foch, carbonic maceration effects on. 40:171-4.
 oak aging. 40:224-6.
 oxidation. 40:31-5.
 phenolic content. 40:36-42.
 polysaccharide molecular weight determination. 40:221-3.
 pomace contact effect on phenolic content and quality. 40:36-42.
 prefermentation treatment. 40:36-42.
 Seyval blanc, oak aging. 40:224-6.
 soluble protein. 40:189-93, 199-207.
 sparkling, light effect on sensory qualities. 40:265-71.
 sulfited. 40:272-6.
 urea, determination. 40:143-4.
 involvement in ethyl carbamate formation. 40:1-8, 219-20.
 White Riesling, soluble protein in. 40:199-207.
 yeast. *See* Yeast(s).

XYZ

Xylem exudate chemical composition. 40:155-60.
 Yeast(s), DNA fingerprinting. 40:309-15.
 hexose uptake in. 40:9-15.
 hulls. 40:61-4.
 identification of strains. 40:309-15.
 immobilized. 40:233-40, 292-8.
 killer. 40:292-8, 309-15.
 preservation by drying on calcium alginate swabs. 40:214-18.
 Saccharomyces bayanus, hexose uptake. 40:9-15.
 Saccharomyces cerevisiae, continuous wine fermentation. 40:292-8.
 deacidification of wine. 40:233-40.
 hexose uptake. 40:9-15.
 identification of strains. 40:309-15.
 second fermentation in Champagne wine. 40:175-82.
 vitamin effects on growth and fermentation rate. 40:208-13.
 Schizosaccharomyces pombe. 40:233-40, 292-8.
 survival factors. 40:61-4.
 vitamin effects on growth and fermentation rate. 40:208-13.
 Yield, grapevine, Cabernet Sauvignon. 40:259-64.,
 canopy manipulation effects on. 40:121-9.
 de Chaunac. 40:299-308.
 Gewürztraminer. 40:121-9.
 nitrogen fertilization effects on. 40:85-90.
 phosphorus fertilization effects on. 40:85-90.
 potassium effects on. 40:85-90.
 shoot orientation influence on. 40:259-64.
 summer hedging effects on. 40:109-20, 299-308.
 water deficit, response to. 40:52-60.